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ABSTRACT

This guide introduces the reader to the basics of online database searching using a microcomputer. Following definitions of the terms online, database, and searching, the guide presents information on the online environment, hardware needed, software needed, and configuring the software. A tutorial on online searching covers how to decide when to do an online search; choosing the database; constructing a search strategy; grouping terms; logging on to the vendor and database; entering the search statements; interpreting the results; guides to improving search techniques; and sample searches from several database vendors. A directory of vendors and gateways with a "ball park" indication of costs, suggestions for additional reading, and a glossary conclude the guide. (THC)

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ED264878

ONLINE DATABASE SEARCHING WITH A MICROCOMPUTER: A Guide To The Basics

BY

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802-656-2022

Online Database Searching with your microcomputer can give you access to a large electronic library at home or where you work. Much like the traditional library search for information, there are skills and techniques which can be learned to make more effective and enjoyable use of your time and money. The following guide introduces you to online database searching and directs you to additional, more in-depth resources as needed.

IR051338

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INTRODUCTION

The following is an introduction to using a microcomputer to gather information via the telephone from remote locations about topics of interest to you ... or in the jargon of the field: **online database searching.** Not covered in this guide are the related areas of using electronic mail or electronic bulletin boards.

The term **online** is used to distinguish the present method of gathering information from two older forms. In the computer world, **online** means an interactive environment in which you may pose a question and obtain an immediate response. This differs from the older batch method in which hours or days might elapse between question and answer. In the library world **online** means using the computer to answer a reference question as opposed to relying on the older paper based reference sources such as indexes, abstracts or bibliographies.

The term **database** in its broadest sense, may be defined as a collection (file) of information (e.g.: a citation to a magazine article or a specific statistical fact) in machine-readable form accessible by a computer. Initially, it might be helpful to think of a database as the electronic equivalent to the more familiar index or encyclopedia contained within a library.

The term **searching** is used to suggest that there are strategies and techniques which may be learned to make online searching an efficient and satisfying method of doing research. When you search for information online, much like using a library, knowing how to pose a question and where to search can save an immense amount of time and frustration. **Unlike present day libraries, when you do a poorly prepared online search you will also waste your money. Online searching costs!!!**

Among the frequently asked questions which this guide seeks to address are the following:

- **What is online searching and why might someone want to do searching with her personal computer?**
- **What hardware is needed to do online searching?**
- **What software is needed?**
- **What books and other resources are available to assist the reader in learning how to do an effective search?**
- **Who are the producers and vendors of online databases and how does one get in touch with them?**
- **How much does it cost to search?**

Use this guide to investigate whether online database searching is a microcomputer application for you. As you become interested, look at some of the suggested readings mentioned throughout the guide. Contact some of the vendors mentioned for further information about the services and fee schedules. Your local computer store may be able to assist you in obtaining the right hardware and software for your particular microcomputer.

INTRODUCTION (Continued)

A local library or college can be a useful resource for short courses on online searching, deciding which database is most appropriate, and preparing an online search strategy.

ONLINE ENVIRONMENT

Online searching similar to currently available services began in 1969 when Lockheed Missiles and Space Company designed RECON for NASA. It was the first large scale, online bibliographic retrieval system in the world. It is currently available (in a much enhanced form) as DIALOG.

Growth of online databases has been dramatic. In 1968 there were less than a quarter million bibliographic records available online. By 1980 there were over 75 million records accessible on over 600 different databases. Of this figure, 34 million were related to applied science, 22.8 million to pure science, 10.8 to medicine, 5.0 million to agriculture and 4.2 million records to the social sciences.[1]

By the Fall of 1984, 362 online services were offering 2453 databases assembled by 1189 producers.[2]

The contemporary online environment is made up of five major groups: **producers, vendors, telecommunications networks, gateways** and **users.**

Producers of databases may be commercial publishers, government agencies or professional societies. Frequently the database produced is a byproduct of a publisher's print product. For example H. W. Wilson Co., the producer of Readers' Guide to Periodical Literature, has an online Readers' Guide as well.

Vendors gather various producers' databases, standardize format and make them available publicly. At present there are three major vendors: DIALOG, BRS and SDC. The phone connection between your computer and the database vendor is handled by a **telecommunications network**; best known are TYMNET and TELENET.

Gateways are a recent addition to the online scene. At present their major function has been to ease access to the database vendors for infrequent users by simplifying the billing or searching process. Examples include EasyNet, Business Computer Network, Knowledge Index and BRS/After Dark.

---

1 See Chen, Ching-chih. Online Bibliographic Searching: A learning manual. NY: Neal-Schuman, 1981. pps. 7-8.

2 See Directory of Online Databases. Santa Monica, CA: Cuadra Associates, Fall 1984, p. 5.

ONLINE ENVIRONMENT (Continued)

Finally there are the **users** of online services. Until recently online searching was the domain of the librarian or information professional. At present there is a major effort underway to make online databases more readily available to the general, computer literate public. As with any rapidly expanding area, the distinctions between the above five groups are blurring. For a detailed general introduction to online searching see:

Edelhart, Mike and Owen Davies. OMNI online database directory. NY: Macmillan Publishing Co. 1983.

HARDWARE NEEDED

In addition to a microcomputer you will need the following equipment:

--(asynchronous) **communications adapter**(interface or card) also called a serial card (sometimes this comes as one feature of a multi-function expansion board installed within the computer).

--**modem**....converts computer data into signals which can be transmitted over the phone. You must choose the speed that the data is transmitted (baud rate). The old standard is 300 baud, the current standard is 1200 baud, on the horizon is 2400 baud. You may also have to decide whether you want an internal or external modem. An internal modem fits into one of the expansion slots within the microcomputer reducing the clutter associated with yet another machine on the desk. External modems are about the size of a standard hardbound book and generally reside underneath the telephone. External modems' advantages include clear diagnostic lights which tell you at a glance the status of your phone connection. Internal modems are made for a specific model microcomputer and are not easily interchanged. External modems can be used with a wide variety of micros. An auto-login feature is becoming standard on modems. This feature allows you to dial a phone number via the keyboard(without needing a telephone).

--**telephone** (or phone outlet)

--**cables**

--**printer**...while not essential a printer is quite useful.

For further information see:

Stone, M. David. "Can we talk? A modem primer." PC. 3, May 15, 1984, p. 435.

"Buyer's guide to smart modems." Computers and Electronics. 22, October 1984, p. 63.

SOFTWARE NEEDED

An asynchronous communications software package contains the instructions necessary to allow your microcomputer to "talk" to other computers. Communications software of this type may be divided into three major classes:

"Dumb Terminal" software -- the minimal software necessary, this class of software makes your microcomputer appear like just another compatible terminal linked to the host computer. On the negative side, the thousands of dollars you have spent on your micro's memory and printer are wasted because this type of software doesn't allow you to make use of them. On the positive side, this type of software can be had at minimum cost or for free (see sources below)!

Smart communications software -- this class of software is the most commonly available; one version or another can be found at nearly every microcomputer store. Some of the features most desired by online searchers include:

PRINT: this feature allows information displayed on the screen to be printed. Some software will print the data as it is received or entered. Other packages load this information on to disk for printing after the search is over.

SAVE: this feature allows you to save the screen display to a file on disk. This is handy if you want to edit your search results.

COMMAND TOGGLE: this feature allows you to switch easily between the host and local (micro) operating systems so that you may turn on or off the printer, adjust various settings, upload/download files, etc. without losing contact with your host.

FLEXIBLE COMMAND STRUCTURE: this feature allows the beginner to start with friendly menus and then progress to faster commands (bypassing the menus). Function keys should be easily programmed by the user to save keystrokes.

MACROS AND AUTOMATIC LOGON: this feature allows you to store appropriate configuration settings(see below), phone numbers, passwords etc. to allow easy access to frequently called vendors.

BREAK KEY: this feature allows you to interrupt the vendor's online system without otherwise affecting your search. Useful when you have mistakenly asked the vendor to display the first 7000 citations rather than the first !!!

STATUS INDICATORS - MEANINGFUL DISPLAYS: these features should be an unobtrusive part of your search screen as you conduct your search. Features include: printer status, save(file to disk) status, time, time since connected, etc.

SOFTWARE NEEDED (Continued)

Specialized communications software -- this class of software is designed for either a specific vendor(s) or a specific database. The narrow focus of the software and resulting cost of purchase make this software useful only for the frequent searcher.

No matter which type of software you choose, be sure that it is compatible with your micro and that you have enough memory to run the software effectively. Consider what you are going to do with the results of your online search. If you are writing a research paper, can your word processing package make use of your results stored on disk? If you are creating a database of useful citations, how easy is it to re-format search results into a form recognizable by your data base manager?

For additional information see:

AT&T computer software guide. Reston, VA: PrenticeHall, 1985.
Froehlich, Robert. Free software catalog and directory. NY: Crown Books, 1984.
Glossbrenner, Alfred. How to get free software. NY: St. Martin's Press, 1984.
Microcomputer Software. Delran, NJ: Data Pro, Latest.
IBM PC expansion guide. Indianapolis, IN: Que, 1984.
IBM software directory. NY: Bowker, 1984.

CONFIGURING THE SOFTWARE

When you use communications software you must set a group of technical specifications called telecommunications protocols so that the vendor you are trying to access will recognize your micro. These protocols may include baud rate, parity, data bits, XON/XOFF, auto line feed, block mode, full or half duplex, etc. Each vendor may have different protocols and should be contacted for the correct specifications before running a search. In general, expect to spend some frustrating moments with the communication software and modem manuals, and with the factsheets obtained from the vendors (see below).

As a start, try the following settings for BRS and DIALOG:

BAUD RATE: Matched to your modem. The current standard is 1200.
PARITY: EVEN or NONE (it doesn't matter which).
DATA BITS: 7
XON/XOFF: ON if using a telecommunications network (e.g. TYMNET)
OFF if dialing directly to the vendor.

AUTOLINE FEED	OFF	COM PORT	1
STOP BITS	1	BLOCK MODE	OFF
ADD NULS	0	ABM/ANSWERBACK	OFF

For additional information see:

Goodman, Danny. "First time on line." PC World. 4(1), January 1986, p. 134-140.

CONFIGURING THE SOFTWARE (Continued)

From the vendors ask for:

BRS: "BRS/Micro interface."
DIALOG: "Making the DIALOG connection with a personal computer."
"Interfacing your computer with Knowledge Index."
NLM: "Terminal access to the NLM databases."
SDC: "Stepping up to a micro."

ONLINE SEARCHING: A TUTORIAL

When to do an online search? ...advantages and disadvantages...

Online searching has many advantages for researchers including:

SPEED --if you need the information immediately, a computer search for certain types of information, is the best solution.

MULTI-YEAR SEARCHES --a searcher can retrieve all of the years available on a particular database at once instead of searching year by year or month by month as done manually.

CURRENCY -- if you need information about events which happened yesterday, online searching may be the only effective way of obtaining the data.

FREE-TEXT SEARCHING -- if the word appears in the title of the article or in an abstract, you can find it with online searching. With the paper index equivalent you may be limited to indexed terms; e.g. **moving pictures** when you want **films**!

MULTI-CONCEPT SEARCH -- think of the situation in which you want information about 1985 Honda automobiles. A manual index would probably only have the heading "automobiles." You would have to look at all of the automobile articles until you found the specific entries on 1985 Hondas. An online search could first find all the articles that have to do with automobiles, and from that list pull out those that deal with Hondas, and from that group pull out those about 1985 Hondas!

THE ONLY WAY -- increasingly, online databases are being developed which do not have a paper equivalent.

On the other hand, sometimes, doing an online search is not the most efficient solution. Often the determining factor is cost. Librarians see many cases in which the same information can be obtained as quickly, without cost, using existing paper indexes. Most of the online databases cover periods from the early 1970s to the present. If the information you are looking for was published earlier an online search will not succeed. Finally, another reason not to do an online search is simply that there is not a database which corresponds to your subject interest.

ONLINE SEARCHING: A TUTORIAL

Choosing the Database

Once you have decide to do an online search there are over 2500 potential databases from which to choose. Selecting the right one is not an easy task. Many times a familiar paper source will have an online equivalent of the same name. A glance at the printed version will help you to decide how fruitful an online search would be. In the future look for software which will assist you in choosing the right database. A library may have directories listing databases.

Constructing a search strategy

Perhaps the most important thing you can do in this regard is to take the time **before you go online** to understand what you have to do and how to do it. **TIME IS MONEY** when you are online. Become familiar with logon procedures and the comma language of the chosen vendor and database in advance.

Some of the questions to answer before going online about your chosen database include:

--Does the database use a pre-determined or fixed set of subject headings (sometimes called a controlled vocabulary or descriptors) or do you enter any word which you think appears in the title or abstract (see free text above)?
--If a controlled vocabulary is used, can you get a copy of the list of subject headings (called a thesaurus) in advance? Libraries frequently have the thesauri of the major databases.
--What parts of the citation can you search? For example, you may be able to limit your search to a specific publication year, industry type, geographic location, etc.

Many vendors or producers have prepared factsheets on their databases that may be obtained by calling or writing them.

Grouping your terms

When preparing your search strategy it is helpful to group like concepts together. Frequently these groups will be referred to as sets. Once online you will enter these sets together and then manipulate the groups using **Boolean operators.** Boolean operators?!#?! Look at the following example for an explanation.

Suppose we continue with the example of looking for information about 1985 Honda automobiles, particularly the Civic model.

We begin by grouping the terms as follows (with similar or related terms one below the other):

SET 1	SET 2	SET 3	SET 4
Automobile	Honda	Civic	1985
Auto	Japanese	Sub-compact	(Earlier years)
Car(s)			

Grouping your terms (Continued)

There are three commonly used Boolean operators which most online searchers use. When entering related terms you will use the **OR** Boolean operator. For example:

Automobile OR Auto OR Car OR Cars

The OR operator tells the computer software to group all of these terms together.

The **AND** Boolean operator tells the computer software to look for all the entries that have the first term (or group) and (also) the second term (or group). For example:

Honda AND Civic

The computer software first searches for all the entries which have the word "Honda" in them. Then the program looks in that group for all the entries that also have the word "Civic".

The last common Boolean operator is **NOT.** The NOT operator eliminates entries from an existing group. For example, Honda NOT four-door would remove those articles about four-door Hondas. A detailed explanation of the use of Boolean operators can be found in information packets available from most vendors. You may also want to consult the guides mentioned below.

Logging on to the vendor and database

Once you have prepared your search you are ready to logon. First you will dial the required phone number. Depending on your modem and communications software you may do this manually; by entering the number via the keyboard; or by storing the phone number on the computer and simply pressing a single key(referred to as an auto logon macro). You will hear a high pitched tone until the connection is made. Once you have made the connection you may be asked to identify your type of microcomputer (try typing the letter "a"). Then you will be prompted for one or more passwords.

Entering the search statements

Each vendor will have its own method of entering your search request into the system. On the one extreme is the use of an abbreviated command language used by professional searchers. For example, in DIALOG a searcher might enter:

S Honda

This tells the computer software to select all entries that have the word Honda in them. For further examples see the BRS and DIALOG sample searches below.

Entering the search statements (Continued)

On the other extreme are "user-friendly," menu-driven, databases which try to make online searching easier. For examples of searches on these types of services see the KNOWLEDGE INDEX and BRS/AFTERDARK sample searches below. For the beginner these types of services are desirable.'

Computer searching, like most tools, has limits. At present computers cannot guess what you mean. Computers software will search for strings of characters, not concepts. For example, if you enter "car" and you also mean to include "cars", "autos" and "automobiles", the computer software will not include these terms unless you type them.

Interpreting the results

The results of an online search can be large or small, easy to understand or complex: an airline schedule, the population of Seattle, WA; a bibliographic citation and abstract; a stock quote. For some researchers the desired result is nothing. A grant writer might wish to be sure that no one else has proposed a similar project before she does. The most common type of result is a citation to a magazine article.

Guides to Improving your Online Search Technique

Online database searching can be understood at many different levels. Consult some of the sources listed below for a more detailed look.

BEGINNER

Chen, Ching-chih. Online Bibliographic Searching: A learning manual. NY: Neal-Schuman, 1981.

ADVANCED

Li, Tze-chung. Introduction to Online Searching. Westport, CT: Greenwood Press, 1985.

Meadow, Charles T. and Pauline Cochrane. Basics of Online Searching. NY: John Wiley and Sons, 1981.

Sample Searches

On the following pages are sample searches from frequently used database vendors including BRS, DIALOG, BRS/AFTER DARK and KNOWLEDGE INDEX.

Sample Searches

BRS

```
CONNECT                                                    LOGGING IN
x::X':xxxx('xx('x     a  carriage return (CR)
-5104-002-
please log in: CONTROL H brs

host: call connected

ENTER BRS PASSWORD
XXXXXXXXX
SIGN ON IS COMPLETE 07/09/85 15:51:11

ENTER YES IF BRODCAST MESSAGE IS DESIRED: n
                                                  DATABASE SELECTION
ENTER DATABASE NAME: eric

BRS/ERIC/JUNE 1985

BRS SEARCH MODE ENTER QUERY
                                              ENTERING SEARCH STATEMENTS
1: rural areas
RESULT          2856
2: day care or child adj care
RESULT          2167
3: 1 and 2
RESULT            75
4: 3 and case studies
RESULT             5

6:  ..print 4 bibl/doc=1
                                                       SAMPLE CITATION
  1
EJ314742
AU  LASKOWSKI, GAIL S.
TI MARKETING A NOT-FOR-PROFIT CHILD CARE
    PROGRAM IN A RURAL AREA
SO  JOURNAL OF CHILDREN IN CONTEMPORY SOCIETY.
    V17N2.,P. 59-66. WIN 1984.
AB  Details marketing strategies which, through
    effort rather than expense, increased enrollment ....

                                          PRINTING RESULTS OFFLINE
YOUR OFFLINE QUERY HAS BEEN SAVED UNDER THE NAME OF Q1100


CONNECT TIME  0:03 HH:MM  0.023 DEC HRS  SESSION 2765    TIME
EST COMP COST:  C-HRD  DB-ROY  CIT-ROY  COMM    TOTAL     and
                $4.05  $ 1.65  $ 1.05   $2.02   $8.77    COST
SIGNOFF       16:01:28 07/08/85                         DATA
network: call cleared by request
```

Sample Searches

DIALOG

LOGGING IN

```
ENTER YOUR DIALOG PASSWORD
XXXXXXX   LOGON FILE 75 Mon 8Jul85 12:45:10 Port667
(News Announcements from DIALOG)
?  b75

FILE75:MANAGEMENT CONTENTS - 1975-1985/June
```

ENTERING SEARCH STATEMENTS

```
        Set       Items  Description

? s government regulation
       1     4567 GOVERNMENT REGULATION

? s banking
       2     3456 BANKING

? c 1 and 2
       3      475   1 AND 2

? s interstate
       4     1234 INTERSTATE

? c 3 not 4
       5      167 3 NOT 4
```

SAMPLE ENTRY

```
? t5/2/1
5/2/1
031234  851304456  AHA
Government Regulation: Good for Business!!
Schmidt, H.K.
Journal of Banking and Finance, Winter 83, 21, p15-23.
LANGUAGES: English
Journal Announcement: 8506
Subfile: Health
Descriptors: Banking; Government Regulation; ....

?..pr5/5/1-40
```

PRINTING RESULTS OFFLINE

```
POO1: Print 5/5/1-40 est. cost of $7.35

? logoff
```

LOGGING OFF

TIME AND COST DATA

```
      8jul85 01:05:32 User22345
    $2.35  0.063 Hrs File75 3 Descriptors
    $7.35  40 offline prints
    $1.65  Tymnet
   $11.35  Estimated Total Cost

LOGOFF  01:06:02

TYMNET: call cleared by request
```

Sample Searches

BRS/AFTER DARK

DATABASE SELECTION

```
TYPE LABEL FOR DATABASE DESIRED :  mgmt

THE BRS/MANAGEMENT CONTENTS DATABASE
CONTAINS INFORMATION ON BUSINESS, MANAGEMENT,
ECONOMICS, FINANCE, ACCOUNTING, LAW, INDUSTRY
AND MARKETING FROM BOOKS, PERIODICALS AND
REPORTS AS WELL AS FILMS. SLIDES AND GENERAL
NON-PRINT MEDIA....
```

ENTERING SEARCH TERMS

```
TYPE IN SEARCH TERMS
S1  interstate banking
A1  145 ITEMS FOUND

TYPE S TO CONTINUE SEARCHING, P TO
PRINT ITEMS FOUND, M TO RETURN TO
DATABASE MENU, OR O TO SIGN OFF : s

TYPE IN SEARCH TERMS
S2  1 and vermont
A2  2

TYPE S TO CONTINUE SEARCHING, P TO
PRINT ITEMS FOUND, M TO RETURN TO
DATABASE MENU, OR O TO SIGN OFF : p
```

SAMPLE ENTRY

```
#1  AU  Bailey, D.M.
    TI  Interstate Banking Becomes 1983
        Theme in Northeast States.
    SO  New England Business, vol. 5,
        No. 1, Jan. 3, 1983, p. 48-51., Journal.
    DE  Banks and Banking. Legislation.
        Financial-Institution. Government Regulation.
    AB  Interstate banking among Northeastern states,
        including Vermont....
```

LOGGING OFF

```
END OF ITEM, HIT ENTER KEY TO
SEE NEXT ITEM, S TO CONTINUE
SEARCHING, M TO RETURN TO DATABASE
MENU, OR O TO SIGN OFF : o
```

TIME AND COST DATA

```
CONNECT TIME  0:03 HH:MM    0.023 DEC HRS  SESSION 2765
EST COMP COST:  C-HRD    DB-ROY    CIT-ROY     COMM      TOTAL
                $4.05    $ 1.65    $ 1.05      $2.02     $ 8.77
SIGNOFF    16:01:28   07/08/85
network: call cleared by request
```

ONLINE SEARCHING: A TUTORIAL

Sample Searches

Knowledge Index

DATABASE SELECTION

```
? BEGIN PSYC/INFO

Now in PSYC/INFO
Search No. 765438
```

ENTERING SEARCH TERMS

```
? FIND ADULT CHILDREN AND ALCOHOLISM

     269 ADULT CHILDREN
   13279 ALCOHOLISM
S1     8 ADULT CHILDREN AND ALCOHOLISM
```

SAMPLE ENTRY

```
? DISPLAY S1

THE OFFSPRING OF ALCOHOLICS: OUTCOME PREDICTORS
EL-GUEBALY, NADY.
UNIV. OF MANITOBA, WINNIPEG, CANADA
JOURNAL OF CHILDREN IN CONTEMPORARY SOCIETY
1982 FALL VOL. 15 NO 1 3-12
Language: English
Document Type: JOURNAL ARTICLE
 Reviews studies on the risk of psychosocial
 problems related to drinking among the
 adult children of alcoholics....
Keywords: ALCOHOLISM, PREDISPOSITION,
 PARENTS, GENETICS, ENVIRONMENT

? LOGOFF
```

TIME AND COST DATA

```
Leaving PSYC/INFO
7/8/85 10:34:34 EST
0.023 Hours $2.67 User U45678

TELENET: call cleared by request
```

VENDORS AND GATEWAYS

DIRECTORIES

Edelhart, Mike and Owen Davies. OMNI online database directory. NY: Macmillan Publishing Co. 1983.

Hall, James L. Online bibliographic databases. London, England: ASLIB, 1983.

Directory of Online Databases. Santa Monica, CA: Cuadra Associates. Two editions per year with two supplements.

North American Online Directory. N.Y., NY: R. R. Bowker, 1985.

KEY ADDRESSES AND SERVICES

Bibliographic Retrieval Center (BRS)
1200 Rt. 7
Latham, NY 12110
800-553-5566
518-783-1161

System Availability

Mon. - Sat. 6am - 4am
Sun. 6am - 2pm / 7pm - 4am

Ask for information on: BRS/AFTER DARK
BRS/BREAKTHRU

Business Computer Network
P. O. Box 37
716 College View Dr.
Technical Research Park
Riverton, WY 82501
800-442-0982
800-446-6255
307-857-3722

See: Hewes, Jeremy Joan. "Gateway to on-line services." PC World. May 1985, pps149-156.

Glossbrenner, Alfred. "A low-cost database pool." PC Magazine. April 2, 1985, pps. 315-316.

O'Leary, Mick. "Business Computer Network - A "gateway" to multiple databanks." Online. 9, 3, May 1985, pps. 118 - 122.

SDC(ORBIT)
2500 Colorado Ave.
Santa Monica, CA 90406
800-421-7229
213-820-4111

VENDORS AND GATEWAYS

KEY ADDRESSES AND SERVICES (Continued)

COMPUSERVE
P.O. Box 20212
Columbus, OH 43220
800-848-8990 614-457-8600

See: O'Leary, Mick. "Compuserve and The Source: Databanks for the enduser." Database. 8, 2, June 1985, pps. 100 - 106.

DIALOG Information Services Inc.
3460 Hillview Ave.
Palo Alto, CA 94304
800-227-1927 415-858-2700

SYSTEM AVAILABILITY--DIALOG2

Mon. - Fri.	All the time till 8pm Fri.
Sat.	8am - 8pm
Sun.	From 5pm on

SYSTEM AVAILABILITY--DIALOG KNOWLEDGE INDEX

Mon. - Thur.	6pm - 5am
Fri.	6am - 12 midnight
Sat.	8am - 12 midnight
Sun.	3pm - 5am

Ask for information on: Knowledge Index and see: Kaplan, Robin. "Knowledge Index: A review." Database. 8, 2, June 1985, pps. 122 - 128.

Dow Jones News/Retrieval
Box 300
Princeton, N.J. 08540
800-257-5144 609-452-2000

See: Dempsey, Tim. "Dow Jones News/Retrieval - An indepth look." Database. June 1984 pps. 44-64.

EasyNet
Telebase Systems Inc.
134 N. Narberth Ave.
Narberth, PA 19072
215-664-6168 (Voice only)
800-327-9638 (Modem only)

See: Hewes, Jeremy Joan. "Gateway to on-line services." PC World. May 1985, pps149-156.

O'Leary, Mick. "Easy Net: An offering of current and specialized information." Online. 9, 4, July 1985, pps. 106 - 113.

VENDORS AND GATEWAYS

KEY ADDRESSES AND SERVICES (Continued)

Mead Data General
P. O. Box 933
Dayton, OH 45401
800-227-4908 513-859-1611

National Library of Medicine(NLM)
8600 Rockville Pike
Bethesda, MD 20209
301-496-4193

THE SOURCE
Source Telecomputing Corporation
1616 Anderson Rd.
McLean, VA 22102
800-336-3366
703-734-7500 ext.546

See: Source users manual. McLean, VA: Source Telecommunications, Latest.

O'Leary, Mick. "Compuserve and The Source: Databanks for the enduser." Database. 8, 2, June 1985, pps. 100 - 106.

Wilsonline
950 University ave.
Bronx, NY 10452
212-588-8400

See: Sandler, Corey. "Telecommunications Talk: Reader's Guide goes electronic." Creative Computing. April 1985 pps. 28,30.

COSTS

There is no easy way to estimate in advance how much a computer search will cost. The factors which must be taken into consideration include the complexity of the search, vendor used, telecommunications network, database accessed, time of day, number of citations found and how printed (online or mailed), royalty charges, and length of time connected.

Some "in the ball park" estimates: An average search on a moderately-priced database might cost between $15 - $35. Average figures for some of the cost components: Telecommunications charges: $5 - $18/hr. Royalties: $.05 - $.50/citation. Print charges: $.05 - $.50/citation. In general, government-produced databases (e.g. ERIC) are significantly less costly than those produced by the private sector. Business, legal and applied science areas are among the most expensive.

COSTS (Cont.)

Most vendors will give you an accurate estimate of charges at the end of your online search. **Be sure to obtain a price schedule before you go online!!!**

The way you pay for the search varies depending on the vendor. The common methods include: no minimum charges with no upfront fee; guaranteed minimum use with no up front fee; subscription; and, guaranteed use. For many microcomputer users the no minimum with no upfront fee is the most desirable method of payment. This approach is most common among the newer gateway services.

ADDITIONAL READING...KEEPING CURRENT

BEGINNER

The various computer magazines run frequent articles about using your computer for online searching. For a suggested reading list see:

Fenichel, Carol Hansen. "Online communications publications for end-users." Online. 9, 3, May 1985, pps. 129 - 132.

ADVANCED

BOOKS

Haas, Lou. Going on-line with your micro. Blue Ridge Summit, PA: Tab Books, 1984.

JOURNALS

Online: the magazine of online information systems. (Online Inc., 11 Tannery Lane, Weston, CT 06883, 203-227-8466) Six times a year. $78.00.

Database: The magazine of database reference and review. (Online Inc., 11 Tannery Lane, Weston, CT 06883, 203-227-8466) Four times a year. $56.00.

BY SPECIFIC DATABASE VENDOR

DOW JONES

Dempsey, Tim. "Dow Jones News/Retrieval - An indepth look." Database. June 1984, pps. 44 - 64.

ADDITIONAL READING...KEEPING CURRENT

BY SPECIFIC DATABASE VENDOR

ERIC

Laubacher, Marilyn R. How to prepare for a computer search of ERIC: A non-technical approach. Syracuse, NY: ERIC, 1983.

PREDICASTS

Janke, Richard V. "Business on BRS focus on Predicasts." Database. August 1983, pps. 33 - 50.

GLOSSARY

ACOUSTIC COUPLER: A modem used to connect a micro to a database vendor or gateway. The operator first calls the desired phone number, then places the telephone handset into two rubber cups to make the connection. See MODEM below.

ADDITIONAL INDEXES: Indexes include all searchable fields in a database which are not part of the Basic Index. Additional Index fields are usually non-subject in nature, and are searched by using prefix codes, such as AU= to search the Author field.

ADJACENCY: A term used to indicate the proximity of terms in the record. SOLAR ADJ ENERGY or SOLAR(W)ENERGY requires that the word SOLAR be adjacent to the word ENERGY in the records retrieved.

AND: A Boolean operator (connector) used in searching. The use of AND narrows a search because all terms connected by ANDs must be present in the same document.

ASYNCHRONOUS COMMUNICATIONS: A method of data communications in which the interval of time between characters may vary. With this communication technique each letter is transmitted as it is generated.

AUTOMATIC LOGON: A feature of a communication software package which can be used to logon to a vendor or gateway without individually entering in the necessary software configurations, passwords and user identification.

BASIC INDEX: An alphabetical index of all meaningful terms used in a database. For most databases, the Basic Index includes title, descriptor, identifier, abstract, section heading, and note words when they are available.

BAUD RATE: A measurement of the speed at which data is transmitted over the phone. One baud equals one bit. When using an asynchronous communication software package dividing the baud rate by 10 gives a rough estimate of the characters transmitted per second. Thus a 1200 baud modem transmits at 120 characters-per-second.

BIT: An abbreviation for binary digit. Generally thought of as the smallest unit of information, a bit is usually represented by either a pulse (1) or absence of a pulse (0).

BOOLEAN OPERATORS: Words or symbols used to create search logic which retrieve terms in various combinations. The most commonly used operators are AND, OR, and NOT.

BRS (BIBLIOGRAPHIC RETRIEVAL SERVICES): A commercial database vendor, based in Latham, New York.

GLOSSARY (Continued)

BYTE: A group of eight bits. Name of a well known computer magazine.

CONTROLLED VOCABULARY: Standardized, pre-determined, subject terms used to index documents. Controlled vocabulary terms are generally known as descriptors and are gathered together in a subject thesaurus.

DATA COMMUNICATIONS: The exchange of data messages from one point (or node) to another over communications channels.

DATABASE: A collection (file) of information (data) in machine-readable form accessible by computer.

DATABASE PRODUCER: A compiler and/or publisher of a database or databases. The Educational Resources Information Center is the producer of the ERIC database.

DATABASE VENDOR: An organization which supplies online search services for one or more databases.

DESCRIPTOR: An indexing term, either a word or a phrase, chosen by an indexer to describe the contents of a document. Descriptors are generally pre-defined in a thesaurus.

DIALOG: A commercial database vendor based in California.

FALSE DROP: Irrelevant and unwanted citations or records which match the search strategy and logic.

FIELD: A portion of a record used to store a defined kind of data, such as author, title, abstract.

FREE TEXT SEARCHING: A type of search required when no controlled vocabulary has been used to index the database (or the vocabulary is not known). All fields with subject content, eg. title, abstract, note and identifier fields, can be searched.

FULL DUPLEX: A method of data communications which allows simultaneous transmission and receipt of messages. See also HALF DUPLEX.

FULL-TEXT SEARCHING: Has different meanings in different bibliographic systems. For DIALOG, it means the capability of searching for specified word adjacency throughout the text of the unit record; for BRS, the loading and searching of any term from any field of the unit record.

HALF DUPLEX: A method of data communications which allows both transmission and reception of data, but only in one direction at a time. See also FULL DUPLEX.

GLOSSARY (Continued)

HANDSHAKING: An exchange of control codes or specific characters normally occurring at the beginning of a data communications session used to control the flow of data.

HIT: Retrieved item that matches the entered search strategy. Also referred to as an item or posting.

HOST: A term used synonymously host computer to mean the vendor or gateway being searched.

LIMITING SEARCHES: Ability to narrow or restrict search results, most commonly by publication year, language or document type.

MODEM: An acronym for modulator-demodulator. A device connected to a microcomputer which converts machine (computer) readable data into signals which can be transmitted over the telephone lines. See also ACOUSTIC COUPLER.

NOISE: Unwanted signals that are caused by disruption in the telecommunications network. When line NOISE is severe it is possible to be dropped from the telecommunications network and vendor being accessed. NOISE is beyond the control of the microcomputer operator.

NOT: A Boolean operator (connector) used in a search statement to negate retrieval of unwanted documents.

OFFLINE: The processing of a computer search after the user has given instructions and logged off. The search process goes on while the user is no longer interacting with the computer.

ONLINE: Direct interactive communication between a user and a computer.

OR: A Boolean operator (connector) used to link related terms. It broadens the search statement and increases the number of retrieved documents.

PARITY: A method of detecting errors in the transmission of data over a telecommunications network. At the sending end extra bits are added to each character code before it is transmitted. This is then checked at the receiving end.

PORT: An entry or exit point in a communications network. During heavy use periods it is possible that the host computer's ports will be filled. The message "All ports busy" will be sent to the microcomputer's screen.

GLOSSARY (Continued)

RS-232-C INTERFACE: An Electronic Industries Association standard which defines a communications protocol for data transmission. Printers and modems are often connected to a microcomputer via cables using the RS-232-C standard.

SEARCH STATEMENT: A combination of searchable terms representing the concepts of a question, used to instruct the search program to retrieve a set of records which match the statement.

SEARCH STRATEGY: A set of planned search statements in which the request is given to the computer. The formation of a strategy includes selecting terms, determining the relationships among the terms, and sequencing the search.

THESAURUS: An authority list of subject terms or descriptors used in indexing a collection of documents.

TRUNCATION: The method of using a given symbol to search for a specified term's stem or root plus a specified or unspecified number of additional characters. SHIP$, the truncated form, would retrieve documents containing the terms SHIP, SHIPS, SHIPPING, SHIPPERS, SHIPMENT, etc.

ADDITIONAL TERMS MAY BE FOUND IN:

DICTIONARY

Byerly, Greg. Online Searching: A dictionary and bibliographic guide. Littleton, CO: Libraries Unlimited, 1983.